

REMARKS/ARGUMENTS

In the Final Office Action of May 13, 2009, claims 1 and 3-19 are rejected. Additionally, claims 5 and 18 are objected to. In response, Applicant proposes amending claims 1 and 5, adding new claims 20-25 and canceling claims 10 and 16-19. Support for claim 20 is found at Applicant's specification, for example, original claim 10 and page 5, lines 32 and 33. Support for claim 21 is found at Applicant's specification, for example, Fig. 1, Fig. 2 and page 7, lines 1-16. Support for claim 22 is found at Applicant's specification, for example, page 7, lines 13-15. Support for claim 23 is found at Applicant's specification, for example, Fig. 2, Fig. 3 and page 7, lines 29-31. Support for claim 24 is found at Applicant's specification, for example, Fig. 2, Fig. 3, page 7, lines 8-20 and the paragraph between page 7, line 21 and page 8, line 1. Support for claim 25 is found at Applicant's specification, for example, original claim 11, Fig. 8 and page 10, lines 1-10.

Applicant respectfully requests that the amendments be entered to put the claims in condition for allowance or to put the claims in better condition for appeal. Applicant hereby requests reconsideration of the application in view of the proposed amendments and the below-provided remarks.

Withdrawal of Finality

Applicant respectfully requests that the finality of the present Office Action be withdrawn because the Examiner introduces a new ground of rejection that is neither necessitated by Applicant's amendment of the claims nor based on information submitted in an information disclosure statement.

“Under present practice, second or any subsequent actions on the merits shall be final, except where the examiner introduces a new ground of rejection that is neither necessitated by applicant's amendment of the claims, nor based on information submitted in an information disclosure statement filed during the period set forth in 37 CFR 1.97(c) with the fee set forth in 37 CFR 1.17(p).” (emphasis added) (See MPEP §706.07(a)).

Applicant notes that the present Final Office Action introduces new rejections to dependent claims 5 and 6 in response to Applicant's argument with respect to dependent claim 5 in the Office Action Response filed on January 27, 2009. In particular, the

present Final Office Action notified on May 13, 2009 rejects dependent claims 5 and 6 using elements with reference to Fig. 6 of Tsubaki et al. (EP 1109251 A1, hereinafter “Tsubaki”). However, the previous non-final Office Action notified on November 13, 2008 rejected dependent claims 5 and 6 using elements with reference to Fig. 1 of Tsubaki. Fig. 1 of Tsubaki and Fig. 6 of Tsubaki show two different embodiments of an antenna unit. (See paragraph [0022] of Tsubaki). Thus, Applicant respectfully submits that each of the rejections of dependent claims 5 and 6 in the present Final Office Action is a new ground of rejection.

Additionally, Applicant’s amendments to dependent claims 5 and 6 in the Office Action Response filed on January 27, 2009 are only for correcting informalities. Thus, Applicant further submits that the new ground of rejections to dependent claims 5 and 6 in the present Final Office Action is neither necessitated by Applicant’s amendments to claims 5 and 6 in the Office Action Response filed on January 27, 2009 nor based on information submitted in an information disclosure statement.

Accordingly, Applicant respectfully requests that the finality of the present Office Action be withdrawn.

Claim Objections

The Final Office Action states that claims 5 and 18 are objected to because it is “unclear what is ‘being connected to ground.’” Applicant notes that claim 19, instead of claim 18, includes the phrase “being connected to ground.” In response, Applicant proposes amending claim 5 to replace the phrase “being connected to ground” with the phrase “wherein the second resonator structure is connected to ground.” Additionally, as described above, Applicant proposes canceling claim 19. Thus, Applicant respectfully requests that the objections to claims 5 and 18 be withdrawn.

Claim Rejections under 35 U.S.C. 102 and 35 U.S.C. 103

Claims 1, 3-7, 9-13, 15, 16, 18 and 19 are rejected under 35 U.S.C. 102(b) as allegedly being anticipated by Tsubaki. Claim 8 and 17 are rejected under 35 U.S.C. 103(a) as allegedly being unpatentable over Tsubaki in view of Adam et al. (U.S. Pat. No. 5,774,025, hereinafter “Adam”). Claim 14 is rejected under 35 U.S.C. 103(a) as

allegedly being unpatentable over Tsubaki. Applicant respectfully submits that the pending claims are neither anticipated by Tsubaki nor obvious over Tsubaki and/or Adam for the reasons provided below.

Independent Claim 1

Applicant proposes amended claim 1 to include the limitation “*the switching means comprises a variable capacitance diode*” of claim 10 and to remove the phrase “wherein the switching means is part of the antenna configuration.” As a result, Applicant proposes canceling claim 10. Applicant respectfully asserts that amended claim 1 is not anticipated by Tsubaki because Tsubaki fails to disclose that “*the switching means comprises a variable capacitance diode*” (emphasis added), as recited in amended claim 1.

In particular, Tsubaki discloses that a switch to be connected to a control electrode may be a diode, a transistor or a field-effect transistor (FET). (See paragraph [0051]). However, Tsubaki fails to disclose that a switch to be connected to a control electrode includes a variable capacitance diode. Thus, Applicant respectfully asserts that Tsubaki fails to disclose that “*the switching means comprises a variable capacitance diode*” (emphasis added), as recited in amended claim 1. Because Tsubaki fails to disclose all of the limitations of amended claim 1, Applicant respectfully asserts that amended claim 1 is not anticipated by Tsubaki.

Dependent Claims 3-9 and 11-15

Claims 3-9 and 11-15 depend from and incorporate all of the limitations of independent claim 1. Thus, Applicant respectfully asserts that claims 3-9 and 11-15 are allowable at least based on an allowable claim 1.

New claims 20-25

New claims 20-25 depend from and incorporate all of the limitations of independent claim 1. Thus, Applicant respectfully asserts that claims 20-25 are allowable at least based on an allowable claim 1. Additionally, claims 20-25 may be allowable for further reasons, as described below.

Claim 20

Claim 20 recites that “*the variable capacitance diode is configured to enable a continuous change of the resonance frequency of the antenna configuration.*” Applicant respectfully asserts that Tsubaki and Adam, either alone or in combination, fail to disclose/teach the above-identified limitation.

Claim 21

Claim 21 recites that “*the first resonator structure and the second resonator structure are located entirely in the interior of the dielectric substrate*” (emphasis added). Applicant respectfully asserts that Tsubaki fails to disclose the above-identified limitation of claim 21.

In particular, Tsubaki discloses a first radiation electrode (13) formed on a main surface of a basic body (11) of a dielectric material and a second radiation electrode (14) formed on another main surface of the basic body (11). (See Fig. 1 and Paragraph [0025]). The Final Office Action suggests that the first radiation electrode (13) is equivalent to a “*first resonator structure*” and that the second radiation electrode (14) is equivalent to a “*second resonator structure.*” (See page 3 of the Final Office Action). However, because the first radiation electrode (13) and the second radiation electrode (14) are formed on surfaces of the basic body (11), the first radiation electrode (13) and the second radiation electrode (14) are not located entirely in the interior of the basic body (11).

Additionally, Tsubaki discloses a feeding electrode (35) and a first microstrip antenna (32) formed on a basic body (31) of a rectangular solid made of dielectric material. (See Fig. 6 and Paragraphs [0042] and [0044]). The Final Office Action suggests that the feeding electrode (35) is equivalent to a “*first resonator structure*” and that the first microstrip antenna (32) is equivalent to a “*second resonator structure.*” (See page 4 of the Final Office Action). However, because the feeding electrode (35) and the first microstrip antenna (32) are formed on the basic body (31), the feeding electrode (35) and the first microstrip antenna (32) are not located entirely in the interior of the basic body (31).

Thus, Applicant respectfully asserts that Tsubaki fails to disclose that “*the first resonator structure and the second resonator structure are located entirely in the interior of the dielectric substrate*” (emphasis added), as recited in claim 21.

Claim 22

Claim 22 recites that “*the first resonator structure is sinus-shaped or meander-shaped*” (emphasis added). Applicant respectfully asserts that Tsubaki fails to disclose the above-identified limitation of claim 22.

As described above, the Final Office Action suggests that each of the first radiation electrode (13) and the feeding electrode (35) of Tsubaki is equivalent to a “*first resonator structure.*” (See pages 3 and 4 of the Final Office Action). However, Tsubaki fails to disclose that either the first radiation electrode (13) or the feeding electrode (35) is “*sinus-shaped or meander-shaped,*” as recited in claim 22.

Claims 23 and 24

Claim 23 recites that “*the second resonator structure includes a U-shaped resonator structure and a stripe-shaped auxiliary resonator structure, wherein the U-shaped resonator structure and the stripe-shaped auxiliary resonator structure are contacted to one another*” (emphasis added). Claim 24 recites that “*the second resonator structure includes a W-shaped resonator structure and an auxiliary resonator structure, wherein the W-shaped resonator structure and the auxiliary resonator structure are contacted to one another, wherein the auxiliary resonator structure is stripe-shaped, sinus-shaped, or meander-shaped*” (emphasis added). Applicant respectfully asserts that Tsubaki fails to disclose the above-identified limitations of claims 23 and 24.

As described above, the Final Office Action suggests that each of the second radiation electrode (14) and the first microstrip antenna (32) is equivalent to a “*second resonator structure.*” (See pages 3 and 4 of the Final Office Action). However, Tsubaki fails to disclose that either the second radiation electrode (14) or the first microstrip antenna (32) includes a U-shaped resonator structure and a stripe-shaped auxiliary resonator structure, which are contacted to one another. Tsubaki also fails to disclose that either the second radiation electrode (14) or the first microstrip antenna (32) includes a

W-shaped resonator structure and an auxiliary stripe-shaped, sinus-shaped, or meander-shaped resonator structure, which are contacted to one another.

Claim 25

Claim 25 recites in part that “*a main surface of the antenna configuration is not parallel to a main surface of the printed circuit board, wherein the control electrode is located on the main surface of the antenna configuration, wherein the printed circuit board comprises a feed line attached on the main surface of the printed circuit board and configured to connect the antenna configuration to a frequency generator” (emphasis added). Applicant respectfully asserts that Tsubaki fails to disclose the above-identified limitations of claim 25.*

In particular, Tsubaki discloses that an antenna unit (10) is attached on a mother board (41). (See Fig. 7 and Paragraph [0049]). However, Tsubaki fails to disclose that a feed line is attached on a surface of the mother board (41) and connects the antenna unit (10) to a frequency generator. Tsubaki also fails to disclose that a control electrode is located on a surface of the antenna unit (10). Additionally, Tsubaki fails to disclose that “*a main surface of the antenna configuration is not parallel to a main surface of the printed circuit board” (emphasis added), as recited in claim 25.*

CONCLUSION

Applicant respectfully requests reconsideration of the claims in view of the proposed amendments and remarks made herein. A notice of allowance is earnestly solicited.

Respectfully submitted,

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